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Personnel Selection and White Collar Criminality

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Prepared by

Judith M. Collins, Ph.D.
University of Arkansas at Little Rock

Prepared for

Department of the Navy
Office of the Chief of Naval Research

and

Scientific Officer: Howard Timm, Ph.D.
PERSEREC
99 Pacific Street
Monterey, CA 93940-2481

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Judith M. Collins, P.I.
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300 East 8th Street
Austin, TX 78701-3273

Howard Timm (3)
Scientific Officer
PERSEREC
99 Pacific Street
Monterey, CA 93940-2481

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Abstract

This field research examined psychological characteristics and profiles of upper-level managers who engaged in a specific type of counterproductive job performance: white collar crime. In recent years, performance-personality research has focused on global personality constructs as predictors of job performance. In this study, hypotheses were generated and the performance-personality relationship was investigated from both a personality-specific and higher-order construct approach.

The California Psychological Inventory (CPI) was administered to male and female white collar criminals (N=329) incarcerated in 23 U.S. Federal Prisons, and a control group (N=320) of upper-level managers. Logistic and principal factor analyses, and d-value effect sizes, revealed large differences across several personality-specific characteristics, seven higher-level constructs of personal orientation and four types of life-styles. Identifying individuals who may engage in workplace criminality becomes increasingly important for today's organizations where employee decision-making authority is expanded, and where capabilities are enlarged by powerful technology. But many studies use samples too small to test theories or are based on case analyses with no control groups for statistical comparisons. Further, opportunities for female workplace criminality continue to increase, but no research has investigated female managers such as those of the present study.

Results of this empirical study can lead to predictive research involving the management of workplace performance.

Introduction

This study examined, at both unit and hierarchical-levels of analyses, the psychological phenomena underlying counterproductive job performance, specifically white collar criminality. Personality measures are widely used for personnel selection (Bernardin & Brownas, 1985), and "...the usefulness of personality measures in personnel selection remains stable over time" (Tett, R.P., Jackson, D.N., & Rothstein, M., 1991). Ever since the emergence of the Big Five factors of personality (Fiske, 1949; Tupes & Christal, 1961; Norman, 1963; Smith, 1967; Hakel, 1974; Goldberg, 1981; McCrae & Costa, 1985), a large volume of literature has been generated searching for taxonomies of personality. And many researchers have examined job performance from a construct domain perspective (for example, Barrick & Mount, 1991; 1993; Collins & Schmidt, 1993; Cortina, Doherty, Schmitt, Kaufman, & Smith, 1992; Hough, L.M., 1988, 1991; Tett, Jackson, & Rothstein, 1991; Hays & Hollenbeck, 1993). For example, the "Big Five" Factor III, Conscientiousness, has been shown to be related to productive job performance at one end of the continuum (Barrick & Mount, 1991) and counterproductive job performance at the opposite end (Collins and Schmidt, 1993). Identifying basic taxonomies that underlie the structure and functioning of personality is essential to theory development; and measures of the broad domains of higher-order factors, such as Conscientiousness, are valuable for the prediction of overall job performance. In addition, lower-order specific traits, such

as "reliability" and "thoroughness" that uniquely describe the global construct can be descriptive and predictive of specific job behaviors associated with certain occupational groups. Knowledge of personality-specifics can facilitate personnel selection, classification, development, and other management functions. For example, subtleties of functioning can be recognized among the patterns and configurations of subscales that make up global constructs, such as "g" or "C" (Conscientiousness), providing important and useful information.

One recently reported research examined the construct validity of a personality inventory (the CPI), and an integrity test (PDI Employment Inventory) associated with white collar criminals and non-criminals (Collins & Schmidt, 1993). That research focused on the integrity test and identified a global construct, called "social conscientiousness," which was defined by the integrity test and several CPI scales.

However, Collins & Schmidt (1993) did not examine all of the 20 personality-specific characteristics as measured by the CPI, or the scale profiles, the higher-order personal orientations, or the different types of life-styles; nor did they examine the data separately by gender. In this study, male and female responses to 20 scales of The California Psychological Inventory (CPI), four higher-order profile factors, three global factors measuring personal orientation, and four types of life-styles were all evaluated for the purpose of differentiating individuals who have or have not engaged in white collar crime.

This multiple level examination of the personality-performance relationship involving counterproductive work behavior as defined by commission of crimes may be particularly useful today where organizational restructuring for survival, continuous technological change, and the urgency with which organizations seek the competitive edge all impact human resource management processes. For, while management positions often hold access to confidential and sensitive information, unethical behavior of individuals holding upper-level positions of trust is frequently reported. Further, some researchers predict that the quantity, cost, and international scope of such unethical behavior are likely to increase with the growth of multinational businesses (Hagan, 1986). While estimates of the costs of white collar crime are difficult, Sullivan and Victor (1988) estimate the figures to vary from \$40 billion to over \$200 billion per year. An ideal essential management function, therefore, is the identification of individuals who may be prone to engage in such counterproductive work behavior.

The present research makes several distinct contributions to the study of personality and white collar criminality. First, one of the reasons for the lack of empirical investigations of the psychological characteristics of the white collar criminal is that, in contrast to the present study, few studies have been conducted with sufficiently large samples of white collar criminals from which to test suggested theories. A second related reason is that frequently reported criminality research

is based on case analyses, unlike the present field research with control groups; methodological examinations of white collar criminals without contrasted samples of white collar employees prohibit comparative statistical analyses. Third, the focus of criminality research is often directed toward male offenders only, even though opportunities for white collar crime have become increasingly more available to the large numbers of females entering today's workforce. This research examines both male and female white collar criminals and non-criminals.

In summary, a micro and macro approach is taken to the empirical analyses of the personality characteristics and lifestyles, as described by the CPI scales and their higher-order factors, of male and female white collar criminals and non-criminals.

There are multiple definitions of white collar crime. Sutherland (1940), who coined the term "white collar crime," defined it as "...a crime committed by a person of respectability and high social status in the course of his occupation" (p.9). Reis & Biderman, (1980) defined white collar crime as violations of law to which penalties are attached that involve the use of a violator's position of influence, trust, or power in the legitimate economic or political institutional order for the purpose of illegal gain, or to commit an illegal act for personal or organizational gain. The definition of the Dictionary of Criminal Justice Data Terminology, (U.S. Department of Justice, 1987), and the definition adopted for use in this study,

describes white collar crime as "non-violent crime for financial gain committed by means of deception by persons whose occupational status is entrepreneurial, professional or semi-professional and utilizing their special occupational skills and opportunities; also, nonviolent crime for financial gain utilizing deception and committed by anyone having special technical and professional knowledge of business and government, irrespective of the person's occupation." Hirschi and Gottfredson's (1987) distinction between the event (the crime) and the characteristics of individuals (criminality) is taken in this study. The goal is to identify differences in groups of individuals who may be considered homogeneous but for a particular behavioral response -- engagement in counterproductive work behavior for personal financial gain.

There are several sociological and psychological theories of white collar crime (Sutherland, 1940; Reckless, 1961; Cortes & Gatti, 1972; Yochelson & Samenow, 1977; Wilson & Herrnstein, 1985; Hirschi & Gottfredson, 1987; Blumstein & Cohen, 1987; Fishbein, 1990; Rowe, Osgood, & Nicewander, 1990). However, criminality research has been dominated by the sociological perspective with an emphasis on the outcome of the offense, and the environment in which the offense occurs. Sociologists Hirschi and Gottfredson (1988) point out that this tradition has led to the relative neglect of the potential contributions of other disciplines to the understanding of crime.

Volumes of research have been generated from which many

psychological theories have been developed that emphasize the study of individual differences in understanding behavior. The relevance of comprehensive theories of personality, for example, to the prediction and explanation of behavior is well known (see Maddi, 1989 for a comprehensive comparative analysis of personality theories, and Yochelson & Samenow, 1977; Rowe, Osgood, & Nicewander, 1990; Wilson & Herrnstein, 1985; Fishbein, 1990). While the contribution of the occupational role for the opportunity for commission of a crime is recognized, the still unanswered question remains as to why individuals who have much in common behave differently given the same conditions. The assumptions of this study are that behavior is influenced by personality, and personality characteristics can differentiate white collar criminals from non-criminals.

Method

Subjects

The study samples were also participants in a second study that was reported in Collins & Schmidt (1993). Their descriptions are duplicated here. The total sample (N = 649) was comprised of the following subgroups: male criminals (N = 258); female criminals (N = 71); male non-criminals (N = 148); female non-criminals (N = 172). The mean age for criminals as well as for non-criminals was 49 years.

The criminals were all convicted in federal courts of white collar crimes and were inmates of 23 federal prisons across the U.S. Table 1 lists the white collar crimes that were committed.

Insert Table 1 about here

Non-criminals were employees of several midwest public and private sector organizations holding white collar positions of authority. Table 2 lists a sample of their white collar job titles.

Insert Table 2 about here

Procedure

The California Psychological Inventory (Gough, 1987) was administered to groups of criminals at each of the 23 Federal prisons. At each prison, white collar criminals were notified by case managers that they may attend an informational session to be conducted by a researcher not affiliated with the prison system, for the purposes of studying white collar crime. The first author met with the groups of inmates and asked for their volunteer participation. Group members were informed that all research information would be handled in the strictest confidence, that participation would not be individually identifiable in any way, that participation or non-participation would not affect release dates or parole eligibilities, and that there would be no penalty or prejudice of any kind for withdrawing from or not participating in the research.

Similarly, the CPI was administered to groups of white

collar employees. In each organization the researcher was assisted by the personnel director in identifying those individuals holding upper-level positions of authority and responsibility who also held access to financial resources and confidential information. These employees were then notified of the time and location of the scheduled informational sessions at which time volunteer participation was sought and the CPI was administered.

There were no remunerations nor incentives provided for either criminals or non-criminals for participating in this research. Neither group had knowledge of the study hypotheses, responses to instruments were anonymous, and groups were debriefed upon completion of the instrument.

Measures

The California Psychological Inventory (CPI) (Gough, 1987) describes individuals along 20 personality dimensions, four clusters of profile scales, three global measures of personal orientation and four different life-styles, or types of functioning. Table 3 lists the 20 CPI scales and their intended meanings.

Insert Table 3 about here

Two instrumental purposes of the CPI are to 1) predict what people will say and do in specified contexts, and 2) identify people who will be described by others in ways consonant with the

intentions and names of the scales. "The great strength of the CPI is its demonstrated ability to predict behavior and social reputation" (McCrae, Costa, & Piedmont, 1993); and it has become a respected and frequently used device in personality assessment for purposes of personnel selection (McAllister, 1988). Anastasi (1982, p. 508) stated that the "CPI is one of the best inventories currently available. Its technical development is of a high order and it has been subjected to extensive research and continuous improvement," and Hough (1988) concluded that, of 38 personality inventories examined in a meta-analysis, the "best all-around personality inventory" was the CPI.

A description of the four profile factors, the three global (or structural) factors, and the four types of life-styles follows. A combination of seven scales underlie the first profile factor, Interpersonal orientation: Dominance (DO), Capacity for Status (CS), Sociability (SY), Social Presence (SP), Self-acceptance (SA), Independence (IN), and Empathy (EM). Higher scores on these seven scales indicate social expertise and effectiveness, poise, and self-assurance. The second profile factor, Intrapersonal orientation, is measured by six scales: Responsibility (RE), Socialization (SO), Self-control (SC), Good Impression (GI), Communality (CM), and Well-being (WB). People who score high on the Intrapersonal scales are described as having a sense of responsibility and dependability and personal values, and conform to social standards. Three Cognitive functioning profile factor scales are related to an individual's

intellectual ability: Achievement via Conformance (AC), Achievement via Independence (AI), and Intellectual Efficiency (IE). Finally, a fourth cluster of profile scales, Psychological Mindedness (PY), Flexibility (FX), and Femininity/Masculinity (F/M), tap into conceptual and personal styles.

In addition to the above four profile constructs, three structural (or vector), scales have been identified through factor and smallest-space analyses of the CPI (Bernstein, Garbin, & McClellan, 1983; Karni & Levin, 1972; Levin & Karni, 1970). These three global scales provide measures of three basic themes: Extraversion/introversion (vector 1, or v.1), Normative values (v.2), and Self-actualization (sometimes also called Self-realization or Self-fulfillment) and competence (v.3).

When used interactively, these three structural scales describe four types of life-styles that Gough (1987) called Alpha, Beta, Gamma, and Delta (Figure 1).

Insert Figure 1 about here

In Figure 1, the four theoretical life-styles are defined by the intersection of v.1 and v.2. Thus, for example, the Alpha life-style combines an attitude toward normative behavior with extraversion or out-goingness toward others. Alphas are most often described as highly extraverted, charismatic leaders who adhere to societal norms. However, when Alphas lack a sense of self-fulfillment, they can become "manipulative, self-centered,

and concerned only with achieving their own ends regardless of consequences to others" (Groth-Marnat, 1990, p. 246). Beta types also believe in normative values but, unlike Alphas, they are described as introverted. Betas come across as low key, may avoid the spotlight, and tend to work for sanctioned organizational goals (Meyer & Davis, 1992). Gammas have been found to be norm-doubting and extraverted. While interpersonally oriented, Gammas tend to question rather than accept traditional norms and values and can be innovative and creative leaders; however, if personally unfulfilled, they may be seen as rebellious, selfish, and disruptive (McAllister, 1988). Deltas combine an introversive orientation with normative skepticism and are often described as quiet, reserved and sensitive (Gough, 1990).

The inferences associated with each of the above four types can be modified by the extent to which one is described as self-fulfilled and competent; that is, each type can be further described by the extent to which an individual has achieved the potential of his or her life-style. The level of self-actualization, or self-fulfillment, and competence is measured by the v.3 scale where "1" indicates a low level of self-fulfillment and "7" is a high level of fulfillment. As an example, Gamma types at level 7 have been described as creative; at level 4, alienated; and at level 1, antisocial. Similarly, Alphas may be seen as charismatic, manipulative, or authoritarian; Betas as virtuous, conventional, or conforming; and Deltas as complex, conflicted, or unstable. (Gough, 1987, 1990; Groth-Marnat, 1990;

McAllister, 1988; and Newmark, 1989 provide detailed accounts of these concepts.)

In summary, white collar criminals and non-criminals will be evaluated along 20 scales of the CPI, and profile analysis and type analysis, as defined by the three structural (v.1, v.2, and v.3) scales, will be performed.

Reliability and validity data for the CPI have been reported in numerous journals over the years, including Gough (1987) and Megargee (1972). Internal consistency, parallel forms, and test-retest reliability coefficients were computed for the 20 CPI scales. Alpha coefficients ranged from a low of .52 on Self-acceptance (SA) to a high of .80 on Self-control (SC). The range of correlations for males on parallel forms was .46 (Independence [IN]) to .83 (Well-being [WB]). For females, the range was .42 (Empathy [EM], Communality [CM], and Flexibility [FX]) to .83 on SC. Test-retest correlations for males ranged from .43 (CM) to .76 (SC). For females, the range was .58 (EM and Achievement via Independence [AI]) to .70 (Intellectual Efficiency). Complete information regarding normative data and scale development are available in Gough (1987) and Megargee (1972). Detailed descriptions of CPI scale interpretations can be found in Gough (1990, 1987, 1985); McAllister (1988); Megargee (1972); Groth-Marnat (1984, 1990); and Newmark (1989).

Study Projections and Hypotheses

Previous personality research has revealed that managers and leaders are frequently described as being ambitious,

enterprising, outgoing, and rule-abiding (e.g., Hakstian, Woolsey, & Schroeder, 1987; Osborne & Osborne, 1991; Meyer & Davis, 1992). These are all characteristics of Alpha types who have achieved a higher levels of self-fulfillment and psychological competence. Yet other unrelated research has described juvenile delinquents as having low levels of self-fulfillment, who are either rebellious or quiet, but who reject established norms (Gough & Bradley, 1992). In addition, there is now a large body of literature showing three subscales, Socialization (SO), Responsibility (RE), and Tolerance (TO), to be measures of antisocial behavior. SO, RE, and TO are three of the profile scales that underlie the global factor Intrapersonal orientation. Based on the above literature and previously reported descriptions of the CPI scales and their higher-order factors, several outcomes are projected.

It is expected that the Interpersonal orientation profiles will be similar for criminals and non-criminals since both groups achieved to upper-level management positions where interpersonal interactions are usually expected. However, it is expected that the profile for criminals will be lower than for non-criminals on the global Intrapersonal orientation measure of social norms and values. It is further expected that the profiles will be similar for criminals and non-criminals on the global factor Cognitive functioning, since members of both groups have attained common levels of success in occupations where higher-order processing skills are generally expected.

It is hypothesized that, relative to the other life-style types, more criminals will be classified as Gammas, and a greater proportion of non-criminals will be classified as Alphas.

It is also hypothesized that no no significant differences will be found between criminals and non-criminals on v.1, (Extraversion/introversion), because Alphas and Gammas are similarly described as extraverted and outgoing. Significant differences are hypothesized, however, between criminals and non-criminals on v.2 (Norm-favoring/Norm-rejecting); it is expected that criminals will score lower reflecting skepticism toward established norms and values. Finally, no significant differences are expected between criminals and non-criminals on v.3 (Self-realization and competence), since it is hypothesized that white collar criminals and non-criminals alike may or may not have a sense of self-fulfillment or psychological competence.

In summary, hypotheses were generated based on previously reported research findings and descriptions, and comparative analyses of criminals and non-criminals were conducted across 20 CPI scales, four higher-order profile factors, three structure factors, and four types of life-styles.

Statistical Analyses

Means, standard deviations, and d-value effect sizes were calculated for male and female criminals and non-criminals on 20 CPI scales. T-tests of mean differences for males and females were calculated for the 20 scales and the three structural

scales. Bonferroni's correction for probability was used to control for Type I error (Dunn, 1961). Logistic regression (SAS, Inc.) was used to estimate and test the significance of scale parameters, and principal factor analysis (SAS, Inc.) using Promax rotation was performed to explore broad constructs. CATMOD (Categorical Modeling), (SAS, Inc.) analyzed main effects and interactions for type (Alpha, Beta, Gamma, Delta) and level of Self-realization and competence. The logistic procedure uses the maximum likelihood function for a dichotomous dependent variable such as criminal/non-criminal with continuous independent variables, and CATMOD performs logistic analysis on data that can be represented by a contingency table.

The statistical analyses were conducted in the following four stages: First, each of the 20 scales was evaluated according to its respective d-value and maximum likelihood parameter estimates for the ability to differentiate groups, and correlations among the 20 scales were calculated. D-values are estimates of distance between group means in standard deviation units. In the present study, the d statistic is a measure of how well the variable discriminates between white collar criminals and non-criminals. The effect-size statistic d is calculated as the difference between the means divided by the within-group standard deviation (Hunter & Schmidt, 1990). D-values of .20, .50, and .80 are conventional estimates of small, medium and large effect sizes, respectively (Cohen, 1977).

Second, based on the results of the above scale analysis,

profiles were interpreted.

Third, the three structural scales (v.1, v.2, and v.3) were evaluated for their discriminating utility using d-value estimates; and maximum likelihood estimates were calculated using logistic analysis to test for main effects and interactions.

Fourth, chi-square analyses of 2 x 4 contingency tables were conducted for male criminals/non-criminals and female criminals/non-criminals, by type (Alpha, Beta, Gamma, Delta); and 2 X 3 contingency analysis was performed for males and females by level of Self-realization (low, moderate, high). Logistic analysis of these data for main effects and interactions were performed using CATMOD.

Finally, based on the cumulative results of the above analyses, a summary description was presented of the personality characteristics, both specific and global, that predict propensity toward white collar crime and that describe individuals who may engage in white collar crime. Limitations of the study were addressed, and recommendations were made for future research.

All of the interpretations and descriptions (of the CPI scales and their higher-order factors) were based on research as presented in McAllister (1988), Groth-Marnat (1990), Newmark (1989), Gough (1987), and other reported research as reported throughout this paper.

Results and Discussion

Analyses of the 20 Scales

Table 4 lists the means, standard deviations, and d-value effect sizes for male and female criminals and non-criminals on 20 CPI scales.

Insert Table 4 About Here

Raw scores of 20 or below on Well-being(WB) indicate a fake-bad profile; scores 31 or above on Good Impression(GI) indicate a fake-good profile, and scores of 27 or below on Communality(CM) suggest random marking, inability to read, errors in marking the answer sheet. Examination of WB, GI, and CM for males and females showed no evidence for fake-bad, fake-good, or random responding by criminals or non-criminals.

For males, marked differences were found on nine scales where white collar criminals scored lower than non-criminals. D-value effect sizes greater than $d=.50$ were found on: Responsibility(RE), $d=.88$; Socialization(SO), $d=1.08$; Tolerance(TO), $d=.98$; Communality(CM), $d=.67$; Achievement via Independence(AI), $d=.61$. Effect sizes greater than .35 were found on: Self-control(SC), $d=.48$; Well-being(WB), $d=.42$; Achievement via Conformance(AC), ($d=.35$); and Psychological Mindedness(PY), ($d=.42$).

For females, large differences were found on six scales where white collar criminals scored lower than non-criminals.

Effect sizes greater than $d=.50$ were found on Responsibility(RE), ($d=.52$); Socialization(SO), ($d=.89$); Tolerance(TO), $d=.68$, and greater than $d=.40$ on Communality(CM), $d=.44$; Achievement via Independence(AI), $d=.44$); and Flexibility(FX), $d=.46$.

The largest effect sizes for both males and females were for Responsibility(RE), Socialization(SO), and Tolerance(TO), with lower scores for male and female criminals. RE and SO are two of five CPI scales that measure Normative orientations and personal values. Higher scores on RE are related to rule-abiding behavior and ethical perceptiveness, and lower scores indicate undependability and self-indulgence. Higher scores on SO suggest conscientiousness, and rule-respecting behavior; and low scores suggest counteractive or rebellious attitudes. Tolerance(TO) describes tolerance and trust of other people at one pole, and suspiciousness and distrust at the other. The lower score for criminals on this scale suggests that criminals more than non-criminals are less tolerant and trusting of others beliefs and values. Communality(CM), a third scale that also measures Normative orientation, also differentiated male and female criminals from non-criminals ($d=.67$, males; $d=.44$, females). CM indexes stability and conventionality, and lower scorers may see themselves as unique or different in either a positive or negative way. The large d -values on CM suggests that criminals may see themselves as different from others with dissimilar ideas and preferences, whereas non-criminals view themselves as similar to, and fit in easily, with others. Taken altogether, lower

scores on these four scales (RE, SO, TO, and CM), suggest behavior that is irresponsible, undependable, rule-resistant, and intolerant and distrustful of others. Criminals scored lower than non-criminals on all of these scales.

Criminals also showed lower propensities toward Achievement via Independence (AI), ($d=.61$, males; $d=.44$, females) and Achievement via Conformance (AC), ($d=.35$, males), two measures of Cognitive functioning. Responses to AI indicate strong individualism at the positive end of the continuum and conservatism and compliance at the negative end. Although the score for criminals was significantly lower than for non-criminals, the mean score for both groups was toward the positive direction. This suggests that white collar criminals, to a lesser extent than non-criminals, are self-sufficient, independent thinkers who desire some freedom in decision-making and who can be innovative. Responses to Achievement via Conformance (AC) indicate the extent to which an individual functions in an organized or structured setting with established ground rules. Lower scores on AC indicate a reluctance to fit into a structure and dislike for high degree of organization or rules. While scores for male criminals and non-criminals fell into the upper range ($X=26.68$, criminals; $X=28.49$, non-criminals), the male criminal scores were significantly lower than non-criminals, and AC did not differentiate female criminals and non-criminals. These two measures of the profile construct, Cognitive functioning, suggest that, relative to non-criminals,

white collar male criminals are less independent in thinking and decision-making, and not as comfortable in a structured setting requiring rule-following. The findings also indicate that while female criminals are not as self-sufficient in independent thinking and decision-making as the non-criminals (AI), both female groups function equally well in an organized setting (AC). The lower score for male criminals on both AI and AC, suggest that male criminals may experience difficulty in work or other situations where with their sense of self-sufficiency and freedom in decision-making are bound by rules. It is possible that the ability to compete in the workplace for jobs, promotions, and other scarce resources may be greater for those having higher levels of cognitive functioning as defined by these two scales. Today's management is forced to operate within many boundaries by complying with rules and regulations of numerous international, national, state and local agencies. It is possible that individuals seeking higher levels of achievement who also exhibit lower cognitive functioning as defined by these scales, and who also are not as socially conscientious (RE, SO, TO) as some, may engage in irresponsible, rule-breaking behavior to maintain or increase their competitive advantage or level of success.

The Flexibility(FX) scale did not differentiate male criminals and non-criminals. However, female criminals scored lower than female non-criminals on FX ($d=.46$). FX is an index of ability to adapt and adjust, and of openness to considering and experiencing alternative perspectives. White collar female

employees, more so than the white collar female criminals, are capable of welcoming change and may become impatient in repetitious or routine circumstances, whereas female criminals more than non-criminals may be more conservative in their attitudes where rapid changes are likely to occur. Since most management tasks are various, changeable, and non-routine, it would be expected that individuals holding administrative positions would be flexible and adaptable to effectively meet dynamic job challenges. It is possible that when extreme job challenges are encountered, those deficient in adaptation skills may resort to alternative behavior to achieve their goals. One possible explanation for differences between female criminals and non-criminals on FX could be due to differences in female sex role and social developmental stages. In a study of personality change and women, Helson and Moane (1987) found congruences between decreases on FX and career and sex role involvements. A finding of differences between criminals and non-criminals in female developmental stages that affect some parts of personality may be important for purposes of criminal prevention and rehabilitation.

Three scales discriminated male criminals and non-criminals but not female criminals from non-criminals: Self-control (SC), $d=.48$; Well-being (WB), $d=.42$; Psychological Mindedness (PY), $d=.42$. Male criminals scored lower than non-criminals on these scales. Self-control is a measure of discipline and stability. High scores on SC indicate positive feelings about normative

constraints, tendencies to suppress hostile impulses, and tendencies toward moderation, or conservatism. Alternatively, lower scores indicate undercontrol, a sense of freedom of expression of aggressive feelings, a pleasure-seeking approach to life, and rebelliousness. In short, male criminals relative to non-criminals are less well-disciplined.

On Well-being, male criminals scored lower than non-criminals ($X=30.17$, male criminals; $X=32.37$, male non-criminals). Very low scores (20 and below) on WB indicate unwarranted emphasis on problems, or faking bad. Lower scores short of this point suggest dissatisfaction, worry, and a tendency to complain. Persons with higher scores tend to be insightful, open-minded, and rational in their judgments of self and others. While it would be expected that incarcerated criminals would experience a lesser sense of Well-being, previous research has shown that white collar male criminals generally do not have difficulties in adapting to a prison setting (Benson and Cullen (1988)). These researchers point out that, despite the wide acceptance of the view that white collar offenders are thought to be especially sensitive to imprisonment, the contrary is true. While they may not like the situation they are in, they come to accept it. There were no significant differences on WB for female criminals and non-criminals.

Finally, male criminals scored lower than non-criminals on Psychological Mindedness (PY) (mean = 15.23, criminals; mean = 16.70, non-criminals), a measure of one's effectiveness in dealing

with ambiguity. Scores on PY suggest tendencies toward the abstract and conceptual at one extreme, or concrete and tangible at the other. Related to management styles, higher scorers may be better able to relate to people abstractly rather than personally, or to deal with abstract concepts generally. Lower scores suggest preferences toward accepting others at face value, and for tasks involving tangible and concrete problems. Mean scores for both criminals and non criminals fell in the upper range of the PY continuum, indicating that both types are perceptive and attuned to others and able to deal with conceptual and abstract views; however, these characteristics are stronger for the non-criminal as evidenced by the moderate effect size ($d=.42$).

Self-control(SC) and Well-being(WB), are two of the six profile scales that measure Normative orientation, along with Responsibility (RE), Socialization(SO), Communality(CM), and Good Impression (GI). Except for GI where there were no differences, white collar criminals scored lower than non-criminals on each of these scales indicating general tendencies toward norm-resisting attitudes and irresponsible and undependable behavior. (There were no differences between male and female criminals and non-criminals on the Good Impression (GI) scale, a measure of fake-good response style characteristics.)

In summary, large d-value effect sizes were found for nine of the 20 primary scales for male criminals from non-criminals, and for six scales for female criminals and non-criminals. The

three scales showing the largest d-values for both males and females were Responsibility (RE), Socialization (SO), and Tolerance (TO). White collar criminals scored lower than non-criminals on each of these scales. Moderately large d-values were found on two scales measuring Cognitive functioning (AC and AI) and one measure of role style (PY); male criminals scores were lower than non-criminals. Female criminals scored lower than non-criminals on AI, a measure of independent thinking style, but there were no significant differences between the two group on AC, or ability to function in a structure setting. Female criminals also scored lower than non-criminals on FX, a measure of ability to adapt, but differences on FX were not significant for male criminals and non-criminals. Criminals also scored lower than non-criminals on five of the six CPI profile scales that measure Normative orientation: RE, SO, SC, CM, and WB. In concert, these personality-specific dimensions with their large effect sizes clearly differentiate criminals from non-criminals.

Correlational Analyses. The correlations for the study scales are reported in Table 5.

Insert Table 5 About Here

Consistent with the significant d-value effect sizes, male criminal status was related to RE, SO, SC, CM, WB, TO, AC, AI, IE, AND PY; and female criminal status was related to RE, SO,

CM, TO, AI, AND FX. For both males and females, criminal status was most highly related to SO ($r=.44$), RE ($r=.38$), and TO ($r=.41$).

Univariate Analysis. Tables 6 (males) and 7 (females) present the univariate analysis.

Insert Table 6 About Here

Insert Table 7 About Here

For males, analysis of partial maximum likelihood estimates show the smallest standard errors (relative to their respective parameter estimates) and related significant effects for RE, ($b=.05$, $p<.001$); SO ($b=.04$, $p<.0001$); GI ($b=.05$, $p<.01$); CM ($b=.08$, $p<.001$); TO ($b=.06$, $p<.0001$), AC ($b=.06$, $p<.01$); AI ($b=.06$, $p<.001$); IE ($b=.06$, $p<.001$), and FM ($b=.05$, $p<.0001$).

Small standard errors indicate efficient parameter estimations, and these results are consistent with the effect size differences and correlations reported above. For females, however, only SO, SC, AI, AND IE were significant, given all the other variables in the model. These results are in some ways not surprising, but in other ways quite surprising. It was noted above that for females large d-value effect sizes and significant correlations were seen for SO and AI, but not for either SC or IE. SO and AI are both significantly correlated with criminal status ($r=.37$ and $r=-.19$),

but SC and IE are not. However, moderate and high correlations are seen between SO and SC ($r=.63$) and AI and IE ($r=.89$). This suggests that, for these data, SC and IE may be acting as suppressors. Further, RE and TO would have been expected to enter into the model since both showed large effect sizes and significant correlations with the dependent variable. It appears, however, that SO may carry much of the same information (as RE and TO) since moderate correlations exist between all three variables.

Assessment of the independent CPI scales can identify personality characteristics that differentiate criminals and non-criminals; and, in concert, these scales provide descriptive profiles of white collar male and female criminals.

Profile Interpretation for males. Logistic analysis revealed the joint significance of the 20 personality characteristics in discriminating between criminals and non-criminals [$X^2(20) = 253.85, p<.0001$] (Figure 2).

Insert Figure 2 About Here

Scores that fall at or above the standard score of 50 suggest positive functioning; scores below 50T indicate possible difficulties as measured by the various scale clusters. As shown on Figure 2, there is a divergence along the mean for the Interpersonal and Cognitive functioning scale groups, and for the last three scales of the profile. The first Interpersonal

section of the profile is similar for male criminals and non-criminals; scores are above 50T, and d-value effect sizes were not significantly different. As was projected, these scores indicate that both white collar criminals and non-criminals are generally confident, poised, outgoing individuals who enjoy relating to others from a position of authority. The Intrapersonal orientation profile group, measuring personal values and norm-favoring/norm-rejecting, show a discrepancy between criminals and non-criminals (as noted by the below 50 and significantly different scores for criminals), as was expected. The above 50 scores for non-criminals suggest stable, mature, well-socialized individuals who are sensitive to social demands, exert control over their emotional expression, and make decisions based on reason rather than emotion. The below 50 scores for criminals suggest free-wheeling, sometimes impulsive individuals who trust their intuition and emotions in decision-making. These types are characterized as risk-takers who are opportunistic and decisiveness, and who like action.

The profile group for Cognitive functioning (i.e., intellectual interest and ability) are similar for criminals and non-criminals. Although criminals scored lower on each of these, the scales meanings but not the strength of the meanings are the same for the two groups. That is, both types can work either with or without structure, but prefer a moderate degree of external organization (AC and AI), and are resourceful, knowledgeable, and well organized (IE). The lower criminal scale

scores indicate that criminals experience these tendencies to a lesser extent than do non-criminals.

An examination of the last three conceptual and personal style scales shows that criminals, relative to non-criminals, are less likely to deal with people and issues conceptually and abstractly (PY), relative to non-criminals; both types handle uncertainty but like some structure, are deliberate and determined, but are not immediately open to considering and experiencing change (FX); and can deal with autonomy, have an average need for dependency and affiliation, and are generally practical and self-sufficient (F/M).

In summary, profile analyses revealed that the largest differences between male criminals and non-criminals were on the Intrapersonal orientation scales that measure personal values and normative values.

Profile Interpretation for Females. In Figure 3, the overall profile trends for both criminals and non-criminals are slightly below the average of 50 with the greatest contrast seen on the Intrapersonal, Cognitive functioning, and personal style scales [$X^2(20) = 144.21, p < .0001$].

Insert Figure 3 About Here

There were no significant differences for the Interpersonal scales for female criminals and non-criminals. Taken as a group, these scales suggest that criminals and non-criminals alike

experience the same type of interpersonal-orientation. The overall trend on this portion of the profile falls in the range that suggests moderate tendencies toward goal attainment and motivation to achieve (CS), outgoingness (SY), with average poise and self-confidence (SP), self-acceptance (SA), self-reliance (IN), and responsiveness to others (EM).

Differences in the Intrapersonal portion of the profile is more pronounced with the largest differences for Responsibility(RE), Socialization(SO), and Tolerance(TO). This same basic Intrapersonal pattern was seen for the male profiles.

The criminal profile for Cognitive functioning was slightly lower than for non-criminals, again replicating that of the male groups, and the lower FX score for both groups indicates a reluctance to change, but more so for the female criminals.

In summary, differences in the female criminal and non-criminal profiles appear in the Intrapersonal orientation scales, particularly RE, SO, and TO, and the AI scale of Cognitive functioning, and FX. Of the 20 CPI scales, only these five scales, and CM, showed significantly different effect sizes, and univariate analysis showed significant effects for only SO and AI.

Structural Scale Analysis for Males.

Means, standard deviations, effect sizes for the three vector scales are presented in Table 3.

Significant and large d-value effect sizes were found for males on Extraversion/introversion(v.1), ($d = .44$) and Self-

realization and competence(v.3), ($d=.51$). The d -value effect size for Normative-orientation(v.2) was nonsignificant. Consistently, analysis of maximum likelihood estimates were significant for v.1 ($X^2_{(1)}=22.42$, $p<.0001$) and v.3 ($X^2_{(1)}=21.49$, $p<.0001$), but not for v.2 ($X^2(1)=3.57$, $p<.06$) (Figure 4). The structural scale hypotheses were, therefore, not supported.

Insert Figure 4 About Here

As graphically presented on Figure 4, higher mean scores were seen on v.1 for non-criminals ($X=16.18$) than for criminals ($X=13.51$) indicating a greater tendency toward extraversion (extraversion is scored in the negative direction). For v.2, Norm-favoring/norm-rejecting, male criminals had a lower score ($X=21.94$) than the non-criminals ($X=23.19$). This is consistent with the lower Socialization measure of normative behavior for criminals as reported above. Scores on v.3 were lower for criminals ($X=33.72$) than for non-criminals ($X=38.46$), indicating a greater sense of personal integration, self-fulfillment, and competence for the non-criminals.

Table 8 shows the classification percentages for males on the levels of Self-realization (v.3). Forty-eight percent of the male non-criminals were classified at the highest level of actualization whereas 48% of the criminals were classified at the lowest level [$X^2(2, N = 406) = 22.82$, $p < .0001$].

Insert Table 8 About Here

Because there were large d-value effect sizes between criminals and non-criminals on the Socialization scale (measuring normative behavior), a finding of nonsignificant differences on v.2 (norm-favoring/norm-rejecting) was surprising. However, Gough (August, 1990, personal communication) pointed out that measures on Socialization predict behavior, while v.2 measures attitude toward norm-favoring or norm-rejecting. Thus, while male criminals may believe in the norms of society, their behaviors are inconsistent with their attitudes. It was noted earlier that prior research using CPI scales found lower v.2 scores for delinquents than for non-delinquents (Gough & Bradley, 1991). That this did not occur in the present research indicates that there may be differences across criminal types. It is possible that age and developmental differences are contributing factors for this lack of replication.

Due to the unexpected finding (of similarity between criminals and non-criminals on v.2), exploratory factor analysis was performed to further examine these data. The factor pattern for males revealed only two primary factors (Table 9).

Insert Table 9 About Here

Factor one includes all of the scales that are subsumed under the

Intrapersonal orientation profile on Figure 2; and they are the same scales Gough (1987) classified as Factor II and Factor IV (McAllister, 1988, p. 7-8). Factor II scales (RE, SO, SC, GI WB, TO, and AC) measure overall personal adjustment, mental health, and social conformity; Factor IV scales (CM, RE, SO, WB) measure conventionality and adherence to social norms. V.3, (Self-realization and competence), loaded on factor one. However, v.2, Norm-favoring/rejecting also loaded moderately on factor one for Self-control, Responsibility, Good Impression, Socialization, and Achievement via Conformance. Accordingly, it appears that, for these data, v.3 and v.2 are both tapping into the same factor. It is interesting that v.3 and v.2 are both also correlated with other personality inventory indices of personal integration and normative behavior. Among these scales are Neuroticism on the Eysenck Maudsley Personality Inventory ($r = -.47$, v.3; $r = -.35$, v.2); Emotional Stability on the Guilford-Zimmerman Temperament Survey ($r = .56$, v.3; $r = .35$, v.2); and Personal Integration on the Omnibus Personality Inventory ($r = .57$, v.3; $r = .41$, v.2). These findings are consistent with John's (1990) observations that v.3 appears to be conceptually related to Emotional Stability, the Big Five construct (p. 90) and that v.2 aligns itself conceptually with Conscientiousness (p. 89). The inter-relatedness found here between Emotional Stability and Conscientiousness as measured by v.3 and v.2 has been reported in other personality-performance research. Blake, Potter III, & Slimak (1993), for example, suggest that "...a complex

relationship exists between Emotional Stability and indices of social and occupational success."

Factor two (Table 9) includes all of the Interpersonal orientation scales (Figure 2). As would be expected, v.1, (Extraversion/introversion), loaded with these scales. These findings are in accord with Blake et. al (1993), and John's (1990) observation that v.1 is conceptually related to the Big Five factor, Extraversion.

In summary, male criminals relative to non-criminals are more extraverted and outgoing, appear to engage in behavior inconsistent with attitudes, and are not as reasonably fulfilled, actualized or psychologically competent. Perhaps highly extraverted white collar executives, in an attempt to maintain or reach increasingly higher goals and levels of success, resort to criminal behavior when these goals are greater than their levels of competence and capability, despite beliefs in established rules and norms.

Structural Scale Analysis for Females. There were no significant d-value effect size differences for any of the three vectors for female criminals and non-criminals. Maximum likelihood estimates showed marginal significance for v.1 ($X^2_{(1)}=3.75$, $p<.05$), greater significance for v.3 ($X^2_{(1)}=8.18$, $p<.01$), and no significance for v.2 (Figure 5).

Insert Figure 5 About Here

The structural scale hypotheses for females, as for males, was not supported. The overall female pattern on the structural scales is similar to, but not as pronounced, as for the male group. Thus, female criminals contrasted to non-criminals are more extraverted (v.1); less personally fulfilled (v.3); and engage in behavior that is inconsistent with attitudes, as evidenced by similarities between criminals and non-criminals on v.2, norm-favoring/doubting.

Sixty percent of the female criminals were classified at the lowest level of Self-realization v. 37% for non-criminals [χ^2 (2, N = 243) = 12.56, $p < .01$] (Table 10).

Insert Table 10 About Here

Factor analytic results for females revealed three factors (v. two for the males) (Table 11).

Insert Table 11 About Here

Again consistent with the male results, factor one scales include all of the Interpersonal orientation profile scales and v.1 (Extaversion/introversion).

However, almost as many scales loaded with v.2 as with v.3 (contrasted with all of the loadings on v.3 for the male group). Factor two scales included v.3 (Self-fulfillment and competence) and the Cognitive functioning profile scales. Factor three

carried the Intrapersonal orientation profile scales and v.2 (norm-accepting/doubting). John's (1990) observations regarding the Big Five and v.1 (Extraversion), v.2 (Conscientiousness), and v.3 (Emotional Stability) are apparent here.

In summary, female criminals relative to non-criminals are more extraverted and outgoing, appear more likely to engage in behavior inconsistent with their attitudes, and are less personally integrated, fulfilled and psychologically competent. Overall, the findings for females mirror those of the males.

Type Analysis (Alpha, Beta, Gamma, Delta) for Males.

Table 12 shows the classification percentages of male criminals by type.

Insert Table 12 About Here

Logistic analyses of 2 x 4 contingency tables for sex by type showed significant effects for males ($X^2 [3, N = 406] = 20.75, p < .0001$). For the male criminals only, there were more than three times as many Alphas (N=102) and Gammas (N=91) as there were Betas (N=31) and Deltas (N=34). Gammas were more than three times greater for males in prison than for males are not in prison (91 v. 28), and there were twice as many criminal Alphas compared to non-criminals (102 v. 56). The hypotheses regarding life-style types was, therefore, supported. It was noted above and in Figure 1 that Gammas and Alphas are both extraverted life-style types, and criminals scored lower than non-criminals on

v.1 (Extraversion/introversion).

Figure 6 shows the proportion of male criminals by life-style type, and level of v.3 (Self-realization and competence).

Insert Figure 6 About Here

The graph is interpreted to indicate that 83 percent of all Alphas, criminal and non-criminal, at the lowest level (1-3), were criminals. Likewise, 92% of all Gammas at the lowest level were criminals. On the graph, as one moves from lowest to moderate to higher levels of Self-realization, there are fewer Alpha and Gamma criminals. Two patterns emerge across levels showing that more criminals are Alphas and Gammas than the other two types (Betas and Deltas), and that percents of criminals decrease as levels of Self-actualization increase.

Recall that life-style types are defined in a three dimensional space by the intersections of v.1(Extraversion/introversion) and v.2(Norm-favoring/norm-doubting), and v.3(Self-realization and competence). It has been shown that male criminals and non-criminals were similar on v.2. It appears, therefore, that v.3, the level of personal integration, self-actualization, and sense of capability or competence, is the primary factor that distinguishes male criminals and non-criminals.

Type Analysis for Females (Alpha, Beta, Gamma, Delta).

There were no significant effects for types by females (X^2

[3, $N = 243$] = 2.87, $p < .412$). This is not surprising since significant main effects were found only for v.1 (Extraversion/Introversion), but not for v.2 (Norm-favoring/rejecting), the two scales that conjointly define the four types. However, main effects were found for level of Self-realization and competence (v.3).

As can be seen on Figure 7, at the lowest level (1-3) of Self-realization, 48% of all Gammas are criminals; 13% at the moderate level; and 20% at the highest level. Fifty-two percent of all Alphas (criminal and non-criminal) at the low level were female criminals; at the moderate level, 21% of all Alphas were criminals; and at the highest level of Self-realization, 25% of all Alphas were criminals.

Insert Figure 7 About Here

As with the male groups, larger number of Alphas are criminals than non-criminals at lower levels of v.3 (Self-fulfillment and competence). The trend across levels on Figure 7 shows larger percentages of Alpha and Gamma life-style types for criminals at lower levels of Self-Fulfillment.

General Discussion

Who is the white collar criminal? The following configural hypotheses and descriptions are based on reported CPI literature presented as follows, and elsewhere in this paper.

According to McAllister (1988),

"...lower scores on the "Intrapersonal" profile strongly suggest possible antisocial or asocial behavior. Further, of those individuals having lower scores on RE and SO, "many are self-centered, self-seeking, and expedient. Their ethical boundaries may be loose. They have a tendency to test and break rules and regulations and may not operate within the parameters set by others. They may procrastinate fulfilling basic responsibilities in favor of more flashy endeavors" (p.50).

Male and female criminals are suspicious, rebellious, restless, unconventional, and dissatisfied (RE, SO, TO, and CM); and they lack tolerance for others beliefs and values (TO). They lack self-discipline as evidenced by the low Self-control scores. In combination with low Responsibility and Socialization scores, low scores on Self-control also suggest persons who are highly likely to be risk-takers. White collar criminals tend to use and manipulate other people, and at times they are very opportunistic, as evidenced by their high Social Presence scores along with low measures of Socialization. Their high scores on Dominance, Social Presence, and Self-acceptance are descriptive of "...assertive, competitive individuals who display their dominance in an active, out-front, energetic manner. They have a strong need to win and are sometimes seen as cocky and egotistical" (McAllister, 1988, p.25). White collar criminals,

male and female alike, have a strong need to win, avoid and fear rejection, and will run hard and fast when under pressure. Some may appear outspoken and indifferent to others. The combination of higher Dominance and lower Responsibility scores indicate they are action-oriented rather than detail-oriented, and they can be seen as opinionated. The scores on Capacity for Status and Self-acceptance indicate persons who can generally handle pressure well; and the Capacity for Status and Responsibility combination describe people who are sometimes viewed as opportunistic, manipulative, self-centered, and egotistical (McAllister, 1988, p.36).

The largest proportion of male and female white collar criminals in this sample were Gammas and Alphas with low levels of Self-realization and psychological competence. Gammas who are minimally developed may be seen as inordinately rebellious, selfish, and disruptive; and Alpha types may be viewed as self-centered and out for only themselves.

This research showed two major themes, or continua, that operate in tandem to differentiate male and female white collar criminals from non-criminals: conformance and self-fulfillment. Criminal scores were in the negative direction on scales that measured both of these characteristics. Accordingly, it appears that tendency toward criminality increases as conformity to rules and social values, and self-fulfillment and competence, decrease.

In summary, the above configural descriptions were based on a large number of reported studies examining the CPI scales and

their relationships to deviant behavior (Gough, 1987), but this is the first study to examine white collar criminals using CPI scales. Many dissimilarities in the strength and direction of personality characteristics between white collar criminals and non-criminals were revealed. Evaluation of personality-specific scales as well as global examinations of the overall profiles revealed large differences criminals and non-criminals.

Limitations and Recommendations for Future Research

This research examined the CPI scales at both lower and higher-order levels of analyses using statistical tests of significance; and interpretations of single scale and profile scores were made. Some researchers point out that a focus on significance tests alone obscures the impact of Type II errors (Hunter & Schmidt (1990) (p. 29). In this study, two basic themes underlying the "Intrapersonal" profile scales were identified: emotional stability, as measured by Self-control, Well-being, and Tolerance; and Conscientiousness as measured by Responsibility, Socialization, and Tolerance. Further, complexities underlying vector 2 and vector 3 were revealed; vector 3 is correlated with all of the CPI scales, including those in the "Intrapersonal" portion of the profile, and vector 2 is somewhat correlated with some of the "Intrapersonal" scales. For all of these reasons, future research utilizing a confirmatory factor analytic approach is recommended to conceptually examine the subscales underlying the CPI higher-order factors.

Relatedly, the unexpected findings of criminal and non-criminal similarities on v.2 (Norm-favoring/norm-doubting) is not consistent with other CPI research reports involving deviant behavior (Gough, 1987). Most of this literature involves delinquents, therefore, age and developmental factors may explain these contrasting findings. Future personality-criminality is recommended to investigating differences across types of criminals.

Finally, the identification of lower-order and high-order scales as potential predictors of people who may be prone to engage in white collar crime is important for future predictive research for personnel selection purposes.

Lastly, caution must be exercised in scale interpretations. A number of profile patterns have been identified from research of the interrelated CPI scales. For example, individuals who score low on Responsibility and high on Achievement via Conformance have been described as wanting "...to be on a team, but reluctant to set goals and to be made accountable" (McAllister, 1988, p.63); yet others having higher scores on Responsibility but lower scores on Dominance have been described as "[Q]uiet and calm, they are gentle with others, reserved, and honest" (p.48). Therefore, a low score on Responsibility alone does not describe the white collar criminal. Single score, profile, type and level analysis are all important in the adequate interpretation of the CPI.

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Table 1. White Collar Crimes Committed

Crime

Antitrust violation
Counterfeiting - currency
Counterfeiting - securities
Counterfeiting - unknown
Embezzlement - bank
Embezzlement - other
Embezzlement - savings and loans
Embezzlement - union funds
Forgery
Fraud - bank
Fraud - bankruptcy
Fraud - credit card
Fraud - computer and wire
Fraud - equity skimming
Fraud - Internal Revenue Service
Fraud - other
Fraud - pension
Fraud - postal
Fraud - signal
Fraud - securities
Interstate transportation of stolen motor vehicles
Misuse of public funds
Unknown white collar crimes
Money laundering
Political bribery
Racketeer influence in corrupt organizations (RICO)

Table 2. Job Titles of Non-Offender White Collar Sample

Bank Loan Officers	Accountants
Bank Operation Officers	City Administrators
Bank Trust Officers	Assistant City Administrators
Department Supervisors	City Clerk
Administrative Assistants	Deputy City Clerk
University President	Director of Finance
University Deans	Purchasing Agent
Personnel Administrators	Director Power Division
County Attorneys	Accounting Technicians
City Attorneys	Manager of Engineering
Assistant City Attorneys	Buyer
Assistant County Attorneys	Director Finance & Accounting
Design Engineers	Customer Service Representative
Planning Director	Customer Relations Manager
Utilities General Manager	Lead Customer Service Reps.
Financial Supervisor	Human Services Director
City Assessor	Graphics Specialist
Chief System Operator	Financial Specialist
Public Health Nurses	Veterans Service Officer
Environmental Specialist	Solid Waste Management Director
Senior Electrical Engineer	County Coordinator
Accounting Manager	Director Water Division
Social Service Director	Customer Services Supervisors
Highway Engineer	Supervisor Drafting and Design
Appraiser III	Director Library Services
Manager Information Systems	Store Controller
Court Service Officer	Deputy Director - Library
Court Administrator	Programmer/Analysts
County Treasurer	Data Processing Supervisor
Director Management Services	Director of Recreation
Building Superintendent	Programmer Analyst
Health Services Administrator	Computer Programmers
Administrative Specialist	Superintendent Power Production
Welfare Fraud Investigator	Deputy City Attorneys
Manager Purchasing and Stores	Manager Facilities Services
Director employee Relations	Fire Chief
Captains - Police	Assistant Fire Chief
Lieutenant - Police	Police Officers
Sergeants - Police	Assistant Chief Fire Prevention
Detectives - Police	Chief Building Inspector

Table 3. Intended Implications of Higher and Lower Scores

Scale Name	Description
DO (Dominance)	H: confident, assertive, dominant, task-oriented L: unassuming, not forceful
CS (Capacity for Status)	H: ambitious, wants to be a success, independent L: unsure of self, dislikes direct competition
SY (Sociability)	H: sociable, likes to be with people, friendly L: shy, feels uneasy in social situations, prefers to keep in the background
SP (Social Presence)	H: self-assured, spontaneous; a good talker; not easily embarrassed L: cautious, hesitant to assert own views or opinions; not sarcastic or sharp-tongued
SA (Self-acceptance)	H: has good opinion of self; sees self as talented and personally attractive L: self-doubting; readily assumes blame when things go wrong; often thinks others are better
IM (Independence)	H: self-sufficient, resourceful, detached L: lacks self-confidence, seeks support from others
EM (Empathy)	H: comfortable with self and well-accepted by others; understands the feelings of others L: ill-at-ease in many situations; unempathic
RE (Responsibility)	H: responsible, reasonable, takes duties seriously L: not overly concerned about duties and obligations; may be careless or lazy
SO (Socialization)	H: comfortably accepts ordinary rules and regulations; finds it easy to conform L: resists rules and regulations; finds it hard to conform; not conventional
SC (Self Control)	H: tries to control emotions and temper; takes pride in being self-disciplined L: has strong feelings and emotions, and makes little attempt to hide them; speaks out when angry or annoyed
GI (Good Impression)	H: wants to make a good impression; tries to do what will please others L: insists on being himself or herself, even if this causes friction or problems
CM (Communality)	H: fits in easily; sees self as a quite average person L: sees self as different from others; does not have the same ideas, preferences, etc., as others

Table 3 (continued). Intended Implications of Higher and Lower Scores

Scale Name	Description
WB (Well Being)	H: feels in good physical and emotional health; optimistic about the future L: concerned about health and personal problems; worried about the future
TO (Tolerance)	H: is tolerant of others' beliefs and values, even when different from or counter to own beliefs L: not tolerant of others; skeptical about what they say
AC (Achievement via Conformance)	H: has strong drive to do well; likes to work in settings where tasks and expectations are clearly defined L: has difficulty in doing best work in situations with strict rules and expectations
AI (Achievement via Independence)	H: has strong drive to do well; likes to work in settings that encourage freedom and individual initiative L: has difficulty in doing best work in situations that are vague, poorly defined, and lacking in clear-cut methods and standards
IE (Intellectual Efficiency)	H: efficient in use of intellectual abilities; can keep on at a task where others might get bored or discouraged
PY (Psychological Mindedness)	L: has a hard time getting started on things, and seeing them through to completion H: more interested in why people do what they do than in what they do; good judge of how people feel and what they think about things
FX (Flexibility)	L: more interested in the practical and concrete than the abstract; looks more at what people do than what they feel or think H: flexible, likes change and variety; easily bored by routine life and everyday experience; may be impatient, and even erratic
F/M (Feminine/Masculine)	L: not changeable; likes a steady pace and well-organized life; may be stubborn and even rigid H: sympathetic, helpful; sensitive to criticism; tends to interpret events from a personal point of view; often feels vulnerable
	L: decisive, action-oriented; takes the initiative; not easily subdued; rather sentimental

Note: H = Higher; L = Lower

Table 4. Means, Standard Deviations, & Effect Sizes for Male & Female Criminals & Non-criminals

Scales	Males						Females					
	Non-criminal			Criminal			Non-criminal			Criminal		
	M	SD	d	M	SD	d	M	SD	d	M	SD	d
DO (Dominance)	24.27	6.45		24.82	5.99	.08	20.65	6.60		21.38	6.57	-.11
CS (Capacity for Status)	17.05	3.18		16.86	4.05	.05	15.50	4.26		15.16	4.55	.07
SY (Sociability)	20.81	5.12		21.93	4.79	-.22	20.01	5.64		20.57	4.89	-.10
SP (Social Presence)	24.91	4.76		25.40	4.59	-.10	23.47	5.37		22.61	5.07	.16
SA (Self-acceptance)	18.29	3.27		19.36	3.53	-.31	17.11	3.88		17.29	3.92	-.04
IN (Independence)	18.43	4.06		19.06	4.20	-.15	16.04	4.61		16.54	4.43	-.11
EM (Empathy)	21.43	4.70		20.69	4.56	.15	20.16	4.95		19.63	4.79	.10
RE (Responsibility)	26.70	4.61		22.33	5.30	.88	26.15	4.59		23.67	4.88	.52
SO (Socialization)	32.54	4.77		26.45	6.46	1.08	32.76	6.23		27.19	6.20	.89
SC (Self Control)	22.90	5.86		19.79	7.04	.48	22.15	6.12		22.40	7.01	-.03
GI (Good Impression)	19.55	5.93		18.82	6.79	.11	17.88	6.46		19.35	7.04	-.21
CM (Communality)	36.11	2.30		33.63	5.10	.67	35.88	3.22		34.43	3.26	.44
WB (Well Being)	32.37	4.15		30.17	6.26	.42	30.18	5.53		29.19	6.04	.17
TO (Tolerance)	22.12	4.20		17.68	4.86	.98	21.38	4.73		18.19	4.64	.68
AC (Achievement via Conformance)	28.49	4.58		26.68	5.63	.35	28.23	5.26		28.05	5.03	.03
AI (Achievement via Independence)	24.37	4.85		21.21	5.40	.61	22.56	5.56		20.09	5.56	.44
IE (Intellectual Efficiency)	29.93	4.87		28.39	5.43	.29	27.61	5.84		27.26	5.51	.06
PY (Psychological Mindedness)	16.70	3.22		15.23	3.69	.42	15.18	3.84		14.21	3.63	.26
FX (Flexibility)	13.02	4.26		12.33	4.19	.16	12.44	3.55		10.81	3.39	.46
F/M (Feminine/Masculine)	13.18	3.17		13.53	3.34	-.07	19.90	3.45		19.30	3.22	.18
v.1 (introversive)	16.18	6.27		13.51	5.70	.44	19.13	6.67		17.54	6.94	.23
v.2 (norm-favoring)	23.19	4.68		21.94	5.75	.23	23.52	5.07		22.81	5.37	.13
v.3 (ego-integration)	38.46	8.36		33.72	10.03	.51	35.96	9.62		31.92	10.29	.40

Note: Males: Criminals = 258; Non-criminals = 148; Females: Criminals = 71; Non-criminals = 172

*p<.001 (Bonferroni adjustment)

Table 5. Correlations Among the 20 CPI Scales for Males and Females

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Prison Status	1.0	-.04	.02	-.11	-.05	-.14	-.07	.07	.38	.44	.22	.05	.26	.18	.41	.16	.28	.14	.19	.06	-.05
2. DO (Dominance)	-.05	1.0	.57	.72	.54	.68	.70	.57	.40	.30	.02	.22	.40	.41	.18	.55	.37	.46	.42	.07	.24
3. CS (Capacity for Status)	-.03	.71	1.0	.61	.53	.51	.63	.67	.52	.40	.30	.40	.28	.55	.50	.60	.65	.63	.63	.30	.07
4. SY (Sociability)	-.04	.72	.75	1.0	.71	.72	.58	.62	.28	.18	.08	.17	.30	.36	.15	.46	.35	.45	.37	.15	.22
5. SP (Social Presence)	-.07	.63	.71	.78	1.0	.65	.64	.62	.10	.03	.26	.08	.26	.33	.20	.21	.42	.49	.37	.41	.28
6. SA (Self-acceptance)	-.02	.76	.70	.80	.75	1.0	.57	.51	.18	.01	.23	.08	.28	.28	.07	.32	.33	.42	.28	.18	.17
7. IN (Independence)	-.05	.77	.70	.65	.64	.71	1.0	.54	.29	.21	.12	.26	.29	.57	.34	.43	.55	.61	.55	.30	.28
8. EM (Empathy)	.04	.72	.78	.76	.74	.68	.64	1.0	.42	.29	.10	.25	.24	.42	.44	.44	.59	.53	.52	.42	.16
9. RE (Responsibility)	.23	.48	.56	.40	.35	.39	.48	.50	1.0	.70	.56	.51	.41	.55	.68	.73	.60	.56	.55	.10	.10
10. SO (Socialization)	.37	.22	.31	.24	.18	.13	.24	.29	.64	1.0	.64	.54	.39	.55	.58	.71	.47	.47	.47	.01	.05
11. SC (Self Control)	.01	.04	.14	.01	.13	.13	.14	.09	.53	.63	1.0	.81	.16	.53	.55	.57	.41	.39	.45	.01	.11
12. GI (Good Impression)	.10	.23	.30	.23	.04	.03	.29	.27	.50	.57	.84	1.0	.08	.51	.44	.57	.38	.38	.45	.08	.01
13. CM (Communitarity)	.20	.31	.38	.33	.40	.34	.33	.42	.50	.49	.28	.23	1.0	.64	.32	.48	.36	.49	.25	.02	.06
14. WB (Well Being)	.07	.18	.49	.39	.39	.32	.54	.42	.64	.66	.65	.67	.58	1.0	.60	.64	.64	.73	.56	.22	.14
15. TO (Tolerance)	.29	.37	.58	.37	.37	.33	.46	.50	.77	.60	.52	.46	.51	.68	1.0	.51	.75	.67	.65	.36	.03
16. AC (Achievement via Conformance)	.01	.54	.53	.51	.33	.41	.51	.49	.69	.67	.62	.67	.53	.73	.61	1.0	.55	.61	.55	.02	.02
17. AI (Achievement via Independence)	.19	.50	.65	.47	.47	.43	.59	.61	.66	.41	.39	.41	.45	.58	.78	.59	1.0	.75	.73	.46	.08
18. IE (Intellectual Efficiency)	.02	.53	.64	.53	.51	.48	.63	.58	.70	.47	.48	.49	.49	.70	.77	.70	.89	1.0	.62	.31	.16
19. PY (Psychological Mindedness)	.11	.55	.67	.52	.50	.45	.62	.57	.64	.47	.41	.44	.39	.58	.70	.64	.77	.74	1.0	.32	.11
20. FX (Flexibility)	.20	.22	.45	.34	.47	.32	.36	.40	.29	.11	.00	-.01	.28	.26	.43	.06	.48	.36	.41	1.0	.01
21. F/M (Feminine/Masculine)	-.07	.27	.24	.24	.23	.27	.35	.27	.00	.13	.13	.06	.20	.07	.02	.08	.14	.14	.20	.10	1.0

Note: Male correlations are above the diagonal (N = 406); Female correlations are below the diagonal (N = 243).

Decimal points are omitted. 0 = Offender; 1 = Non-offender.

Table 6. Univariate Statistics for Males

Variable	Estimated Coefficient	Standard Error	Wald
DO (Dominance)	-.04	.05	.82
CS (Capacity for Status)	.02	.07	.06
SY (Sociability)	-.09	.06	2.55
SP (Social Presence)	.03	.06	.22
SA (Self-acceptance)	-.03	.08	.19
IN (Independence)	-.06	.07	.70
EM (Empathy)	.01	.05	.09
RE (Responsibility)	.18	.05	10.10**
SO (Socialization)	.28	.04	33.27***
SC (Self Control)	.00	.06	.00
GI (Good Impression)	-.12	.05	5.55*
CM (Communality)	.30	.08	13.26**
WB (Well Being)	-.09	.06	1.99
TO (Tolerance)	.24	.06	15.51***
AC (Achievement via Conformance)	-.20	.06	8.90*
AI (Achievement via Independence)	.19	.06	9.79**
IE (Intellectual Efficiency)	-.24	.06	15.27***
PY (Psychological Mindedness)	-.01	.07	.04
FX (Flexibility)	-.06	.05	1.39
F/M (Feminine/Masculine)	-.25	.05	18.70***

Note: * $p < .01$; ** $p < .001$; *** $p < .0001$.

Table 7. Univariate Statistics for Females

Variable	Estimated Co-efficient	Standard Error	Wald
DO (Dominance)	.01	.06	.05
CS (Capacity for Status)	-.10	.10	1.03
SY (Sociability)	-.03	.09	.16
SP (Social Presence)	.03	.09	.11
SA (Self-acceptance)	-.01	.11	.01
IN (Independence)	-.14	.10	2.02
EM (Empathy)	-.06	.09	.53
RE (Responsibility)	.14	.08	2.77
SO (Socialization)	.44	.07	31.32***
SC (Self Control)	-.23	.09	6.63*
GI (Good Impression)	-.05	.07	.59
CM (Communality)	.06	.09	.44
WB (Well Being)	-.01	.08	.04
TO (Tolerance)	.15	.10	2.25
AC (Achievement via Conformance)	-.20	.11	2.99
AI (Achievement via Independence)	.33	.09	12.39**
IE (Intellectual Efficiency)	-.27	.08	9.79**
PY (Psychological Mindedness)	-.02	.10	.07
FX (Flexibility)	.04	.08	.25
F/M (Feminine/Masculine)	-.14	.08	2.98

Note: *p<.01; **p<.001; ***p<.0001.

Table 8. Percentage Classification of Levels for Males

Subgroup	Levels of Self Realization			TOTAL
	1	4	7	
Male Non-criminals	37	40	71	148
	9.11	9.85	17.49	36.45
Male Criminals	125	57	76	258
	30.79	14.04	18.72	63.55
TOTAL	162	97	147	406
	39.90	23.89	36.21	100.00

Note: $\chi^2_{(2)} = 22.82$, $p < .0001$.

For each male subgroup, frequencies are followed by percentages.

Table 9. Factor Pattern for Males

Scale	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
v.3	.9252	.2202	.0003	.0912	.1060
TO (Tolerance)	.8586	.0016	-.0760	.1705	-.1371
AI (Achievement via Independence)	.8194	.2674	-.1751	.1932	-.0195
SC (Self-Control)	.7410	-.3568	.3991	-.0167	.2213
PY (Psychological Mindedness)	.7393	.2971	-.0031	.0405	.0551
RE (Responsibility)	.7206	.1239	.3695	.2025	-.2887
IE (Intellectual Efficiency)	.6927	.3425	-.0487	.3733	.1406
GI (Good Impression)	.6644	-.0753	.4964	-.1825	.3785
WB (Well Being)	.6609	.1794	.1051	.5423	.3278
SO (Socialization)	.6407	-.0077	.4697	.2252	-.1485
AC (Achievement via Conformance)	.6241	.2862	.5116	.2645	-.0414
CS (Capacity for Status)	.6191	.5623	.0624	.0221	.0236
SY (Sociability)	.1958	.8246	.1300	.0961	.0498
DO (Dominance)	.2189	.7987	.2925	.1687	.0728
SA (Self-acceptance)	.0742	.7927	-.0455	.1857	-.0127
SP (Social Presence)	.1870	.7778	-.2988	.1545	.0601
IN (Independence)	.4141	.6488	-.0710	.1448	.3229
EM (Empathy)	.5074	.6297	-.0840	-.0123	-.0657
v.1	.1533	-.9078	-.0244	.0989	.0174
v.2	.1580	.1101	.8889	.1133	-.1076
FX (Flexibility)	.3942	.1947	-.6102	-.0216	-.0857
CM (Communality)	.2451	.1898	.1549	.7651	-.0096
FM (Feminine/Masculine)	.0385	-.2900	.0639	-.0560	-.2932
Eigenvalue	7.2428	5.2680	2.4759	1.4346	.6862
Percent Variance Explained	31.47	22.86	10.74	6.22	2.95

Table 10. Percentage Classification of Levels for Females

Subgroup	Levels of Self Realization			TOTAL
	1	4	7	
Female Non-criminals	64	46	62	172
	26.34	18.93	25.51	70.78
Female Criminals	43	8	20	71
	17.70	3.29	8.23	29.22
TOTAL	107	54	82	243
	44.03	22.22	33.74	100.00

Note: $\chi^2_{(2)} = 12.56$, $p < .01$.

For each female subgroup, frequencies are followed by percentages.

Table 11. Factor Pattern for Females

Scale	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
SA (Self-acceptance)	.8571	.2133	.0064	.0926	.0247
SY (Sociability)	.8448	.2017	.1723	.0602	-.0903
DO (Dominance)	.8234	.2442	.1894	-.0730	.2019
SP (Social Presence)	.8103	.2802	-.0241	.1969	-.2342
EM (Empathy)	.7393	.3785	.1734	.0587	-.0664
CS (Capacity for Status)	.7014	.4842	.1862	.0157	-.0670
IN (Independence)	.6982	.3929	.2201	-.1197	-.0359
v.1	-.8617	.0740	.2225	.3056	-.1948
AI (Achievement via Independence)	.3174	.8127	.2578	-.0078	-.0080
TO (Tolerance)	.1599	.8108	.3684	.1739	.0322
v.3	.3080	.7500	.5120	.0073	-.0818
IE (Intellectual Efficiency)	.3722	.6812	.4123	.0444	-.0191
PY (Psychological Mindedness)	.3879	.6591	.3499	-.0315	.0095
RE (Responsibility)	.2597	.6011	.4783	.2264	.2169
FX (Flexibility)	.2483	.5759	-.1887	.0918	-.3586
GI (Good Impression)	.0204	.2083	.8927	-.1707	-.1140
SC (Self-Control)	-.2487	.3214	.8445	.0029	-.0454
v.2	.1639	-.0760	.7535	.3215	.4028
AC (Achievement via Conformance)	.3570	.3474	.7251	.1429	.1664
WB (Well Being)	.2363	.4491	.6709	.1851	-.1862
SO (Socialization)	.0578	.3191	.6626	.3791	.1109
CM (Communality)	.2450	.3521	.2899	.5891	-.0859
FM (Feminine/Masculine)	-.3523	-.0639	.0222	.4523	.0427
Eigenvalue	6.1514	4.9391	4.8283	1.1436	.5978
Percent Variance Explained	26.73	21.43	20.95	4.95	2.56

Table 12. Percentage Classification of Types for Males

Subgroup	Alpha	Beta	Gamma	Delta	Total
Male Non-criminals	56	39	28	25	148
	13.79	9.61	6.90	6.16	36.45
Male Criminals	102	31	91	34	258
	25.12	7.64	22.41	8.37	63.55
TOTAL	158	70	119	59	406
	38.92	17.24	29.31	14.53	100.00

Note: $\chi^2_{(3)} = 20.75$, $p < .0001$.

For each male subgroup, frequencies are followed by percentages.

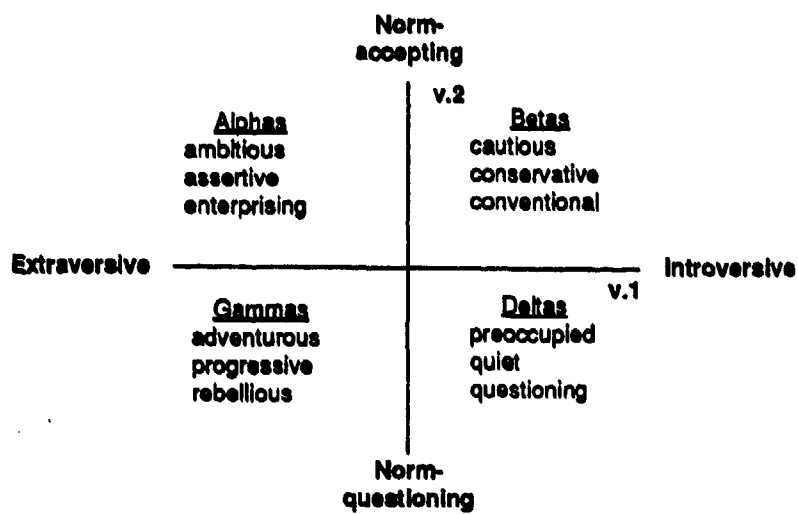


Figure 1. Four Life-Styles Defined by v.1 and v.2

Profile Sheet for the CALIFORNIA PSYCHOLOGICAL INVENTORY

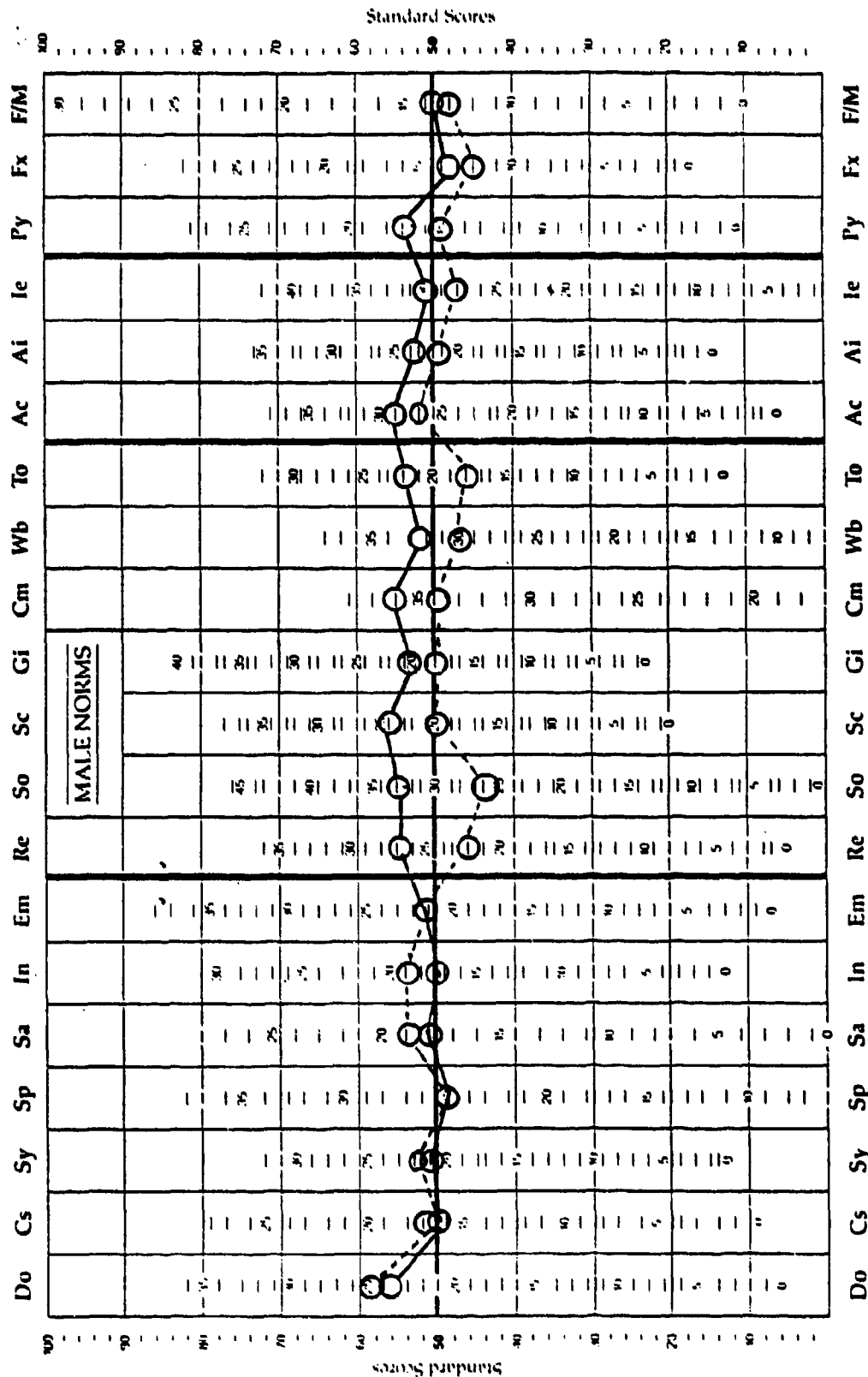


Figure 2. Profiles for Male Criminals and Non-criminals.

Note: Criminals=dotted line; Non-criminals=solid line.

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Profile Sheet for the CALIFORNIA PSYCHOLOGICAL INVENTORY

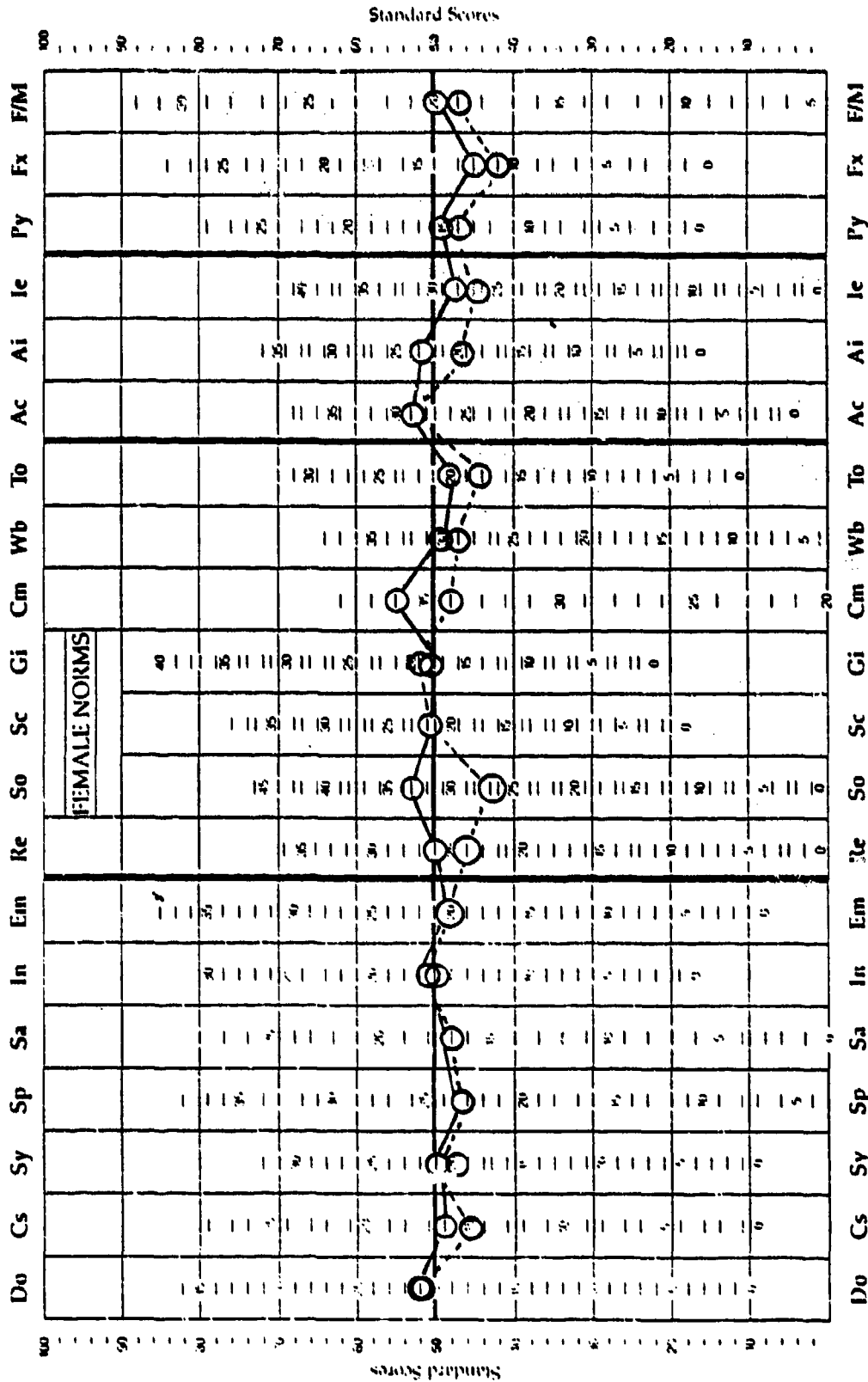


Figure 3. Profiles for Female Criminals and Non-criminals.

Note: Criminals=dotted line; Non-criminals=solid line.
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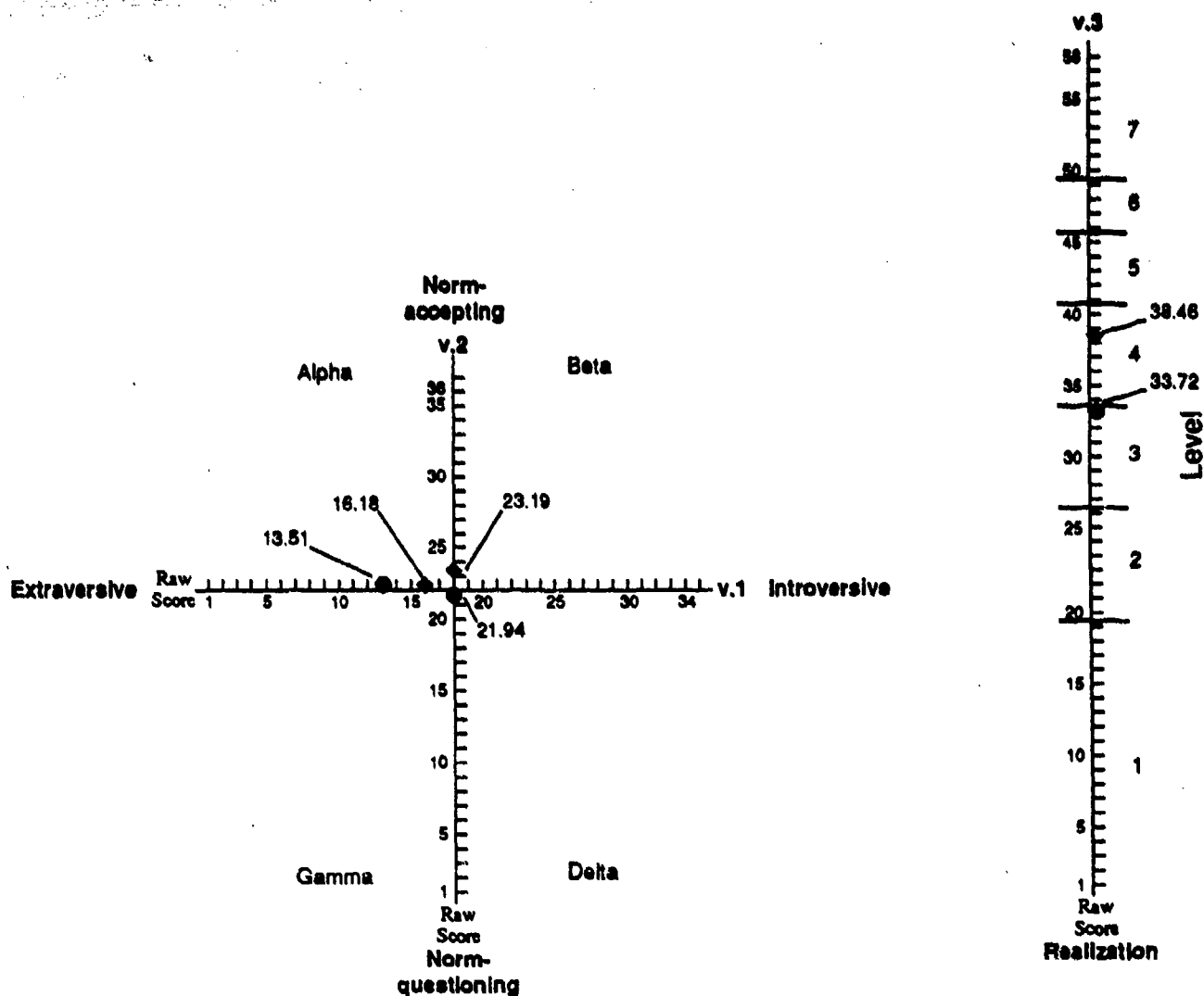


Figure 4. Structural Scale Analysis for Males

● = criminal; ◆ = non-criminal.

Note: v.1: Wald $\chi^2_{(1)} = 22.42$, $p < .0001$.

v.2: Wald $\chi^2_{(1)} = 3.57$, $p < .06$.

v.3: Wald $\chi^2_{(1)} = 21.49$, $p < .0001$.

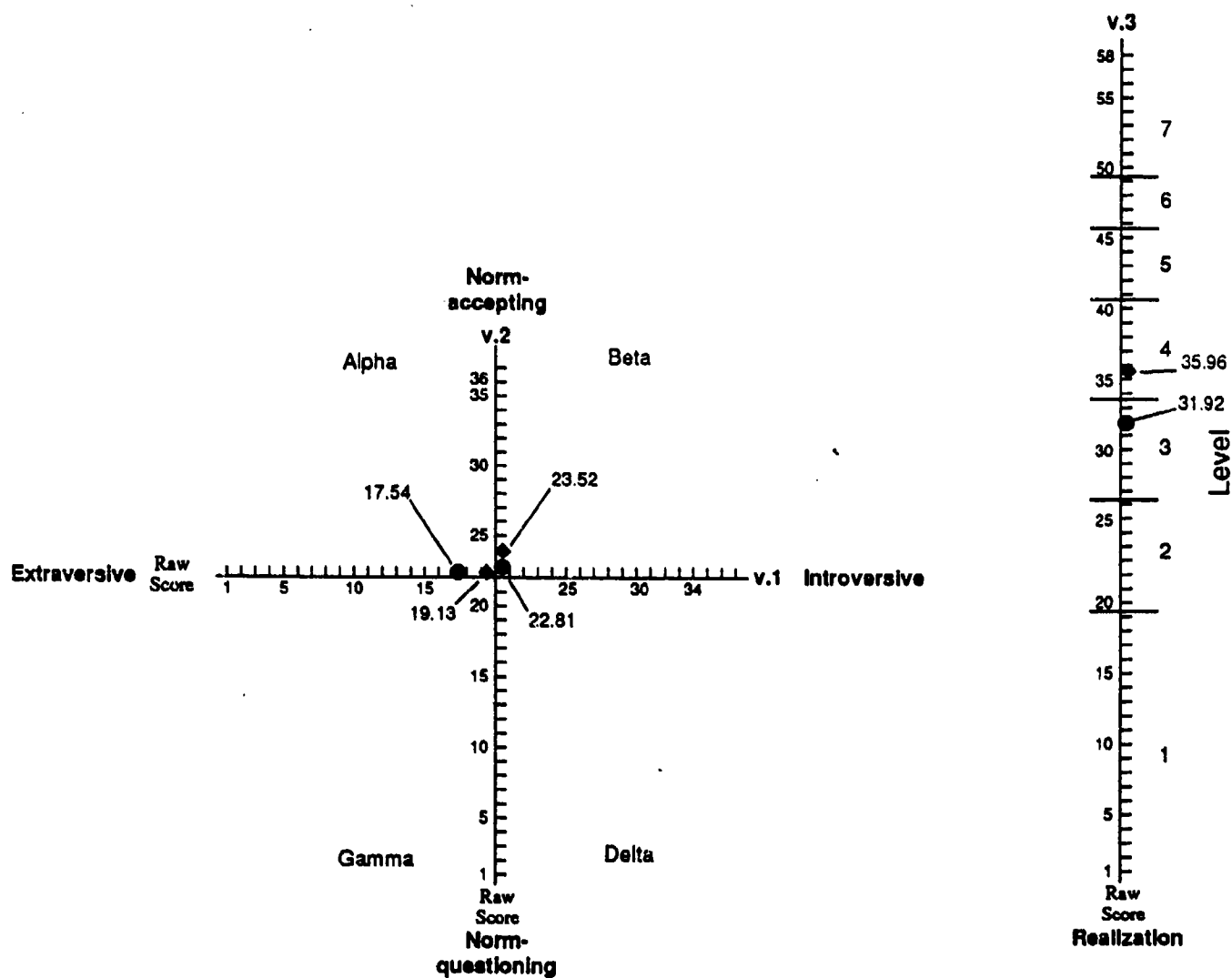


Figure 5. Structural Scale Analysis for Females

● = criminal; ◆ = non-criminal.

Note: v.1: Wald $\chi^2_{(1)} = 3.75, p < .05$.

v.2: Wald $\chi^2_{(1)} = .05, p < .81$.

v.3: Wald $\chi^2_{(1)} = 8.18, p < .01$.

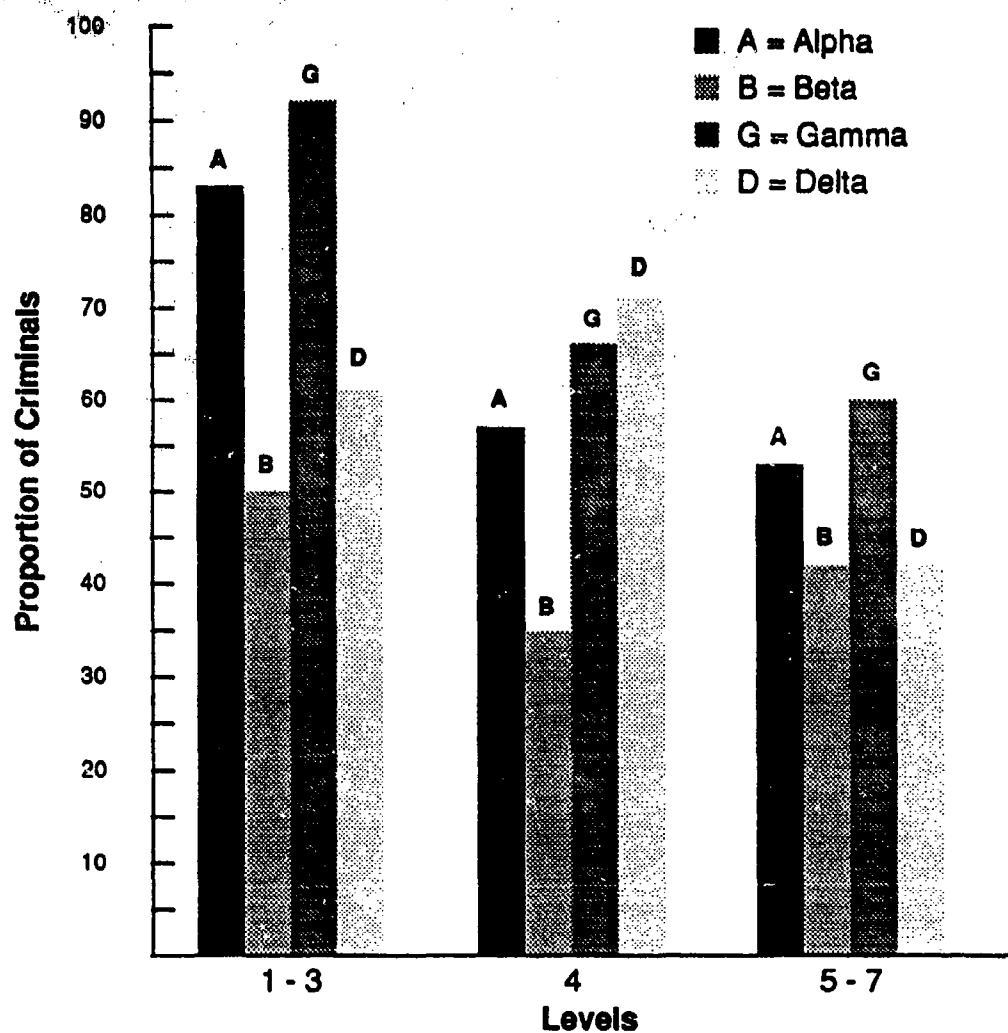


Figure 6. Proportion of Male Criminals by Type and Level

Note: Type: $\chi^2_{(3)} = 18.87, p < .001$.

Level: $\chi^2_{(2)} = 17.74, p < .0001$.

Type*Level: $\chi^2_{(6)} = 9.62, p < .1416$.

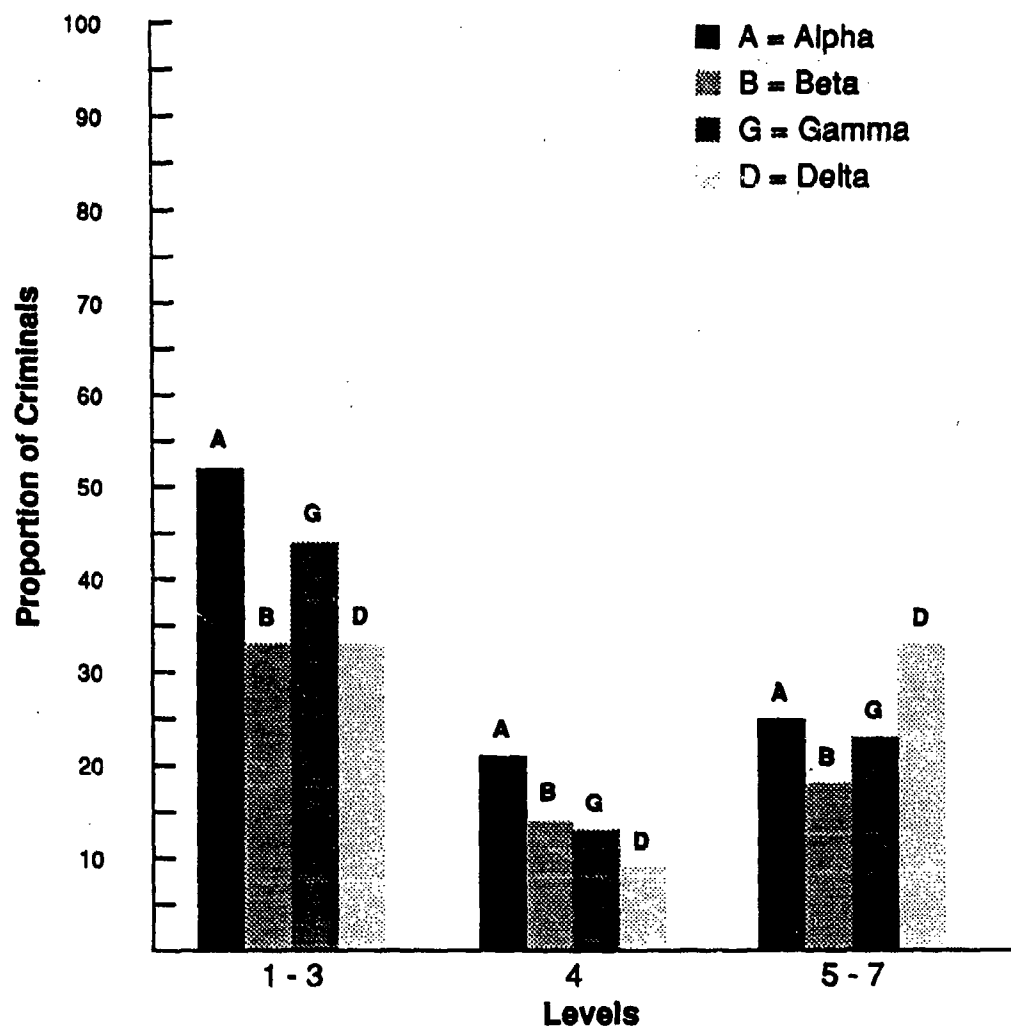


Figure 7. Proportion of Female Criminals by Type and Level

Note: Type: $\chi^2_{(3)} = 1.93, p < .58$.

Level: $\chi^2_{(2)} = 10.86, p < .01$.

Type*Level: $\chi^2_{(6)} = 2.02, p < .914$.